

## **Automatic measurement of callosal angle**

Master Thesis Proposal in Image Analysis and Machine Learning at the Division Vi3, Dept. of Information Technology.

### **Supervisors & Contact**

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### **Background**

The callosal angle has been proposed as a useful radiological biomarker/image feature of patients with idiopathic normal pressure hydrocephalus (iNPH), helpful in distinguishing this potentially treatable clinical condition from other causes of ventriculomegaly. Callosal angle is the angle that is formed between the medial walls of the brain's lateral ventricles and medical research has established that iNPH is correlated with low values of callosal angle (ie acute angle).

You will be working with neuroradiologists that will help you to deeply understand the radiological problem and come up with a method to automatically measure the callosal angle. Your method has the potential to be used and tested clinically, helping both the patients and the physicians.

### **Aim**

To develop and evaluate an image analysis method for automatic measurement of the callosal angle.

### **Prerequisites**

- Proficiency in image analysis/processing and computer programming.
- Experience in medical imaging physics and analysis (e.g., MRI, CT) is preferable.

Example of a published method: Borzage, M. et al. AJNR Am. J. Neuroradiol. 42, 1942–1948 (2021)